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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,670	03/23/2001	Hiroshi Yoshida	09792909-4825	5768

26263 7590 07/17/2002

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EXAMINER

LEUNG, QUYEN PHAN

ART UNIT PAPER NUMBER

2828

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,670

Applicant(s)

YOSHIDA ET AL.

Examiner

Quyen P. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

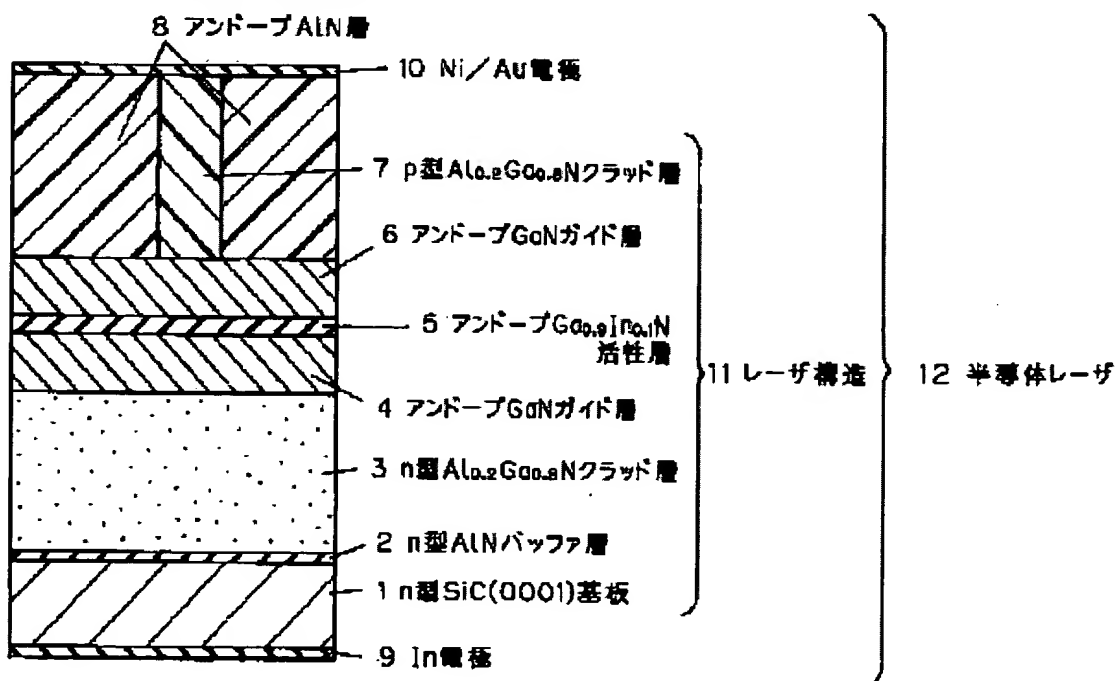
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamimura et al (JP 09-232680-A). Kamimura et al discloses the claimed invention. For example, note figure 1 which illustrates a semiconductor laser light emitting device

【図1】

本発明の、第1の実施の形態における半導体発光素子の構造断面図



comprising a stacked film composed of a stack of group III nitride semiconductor films

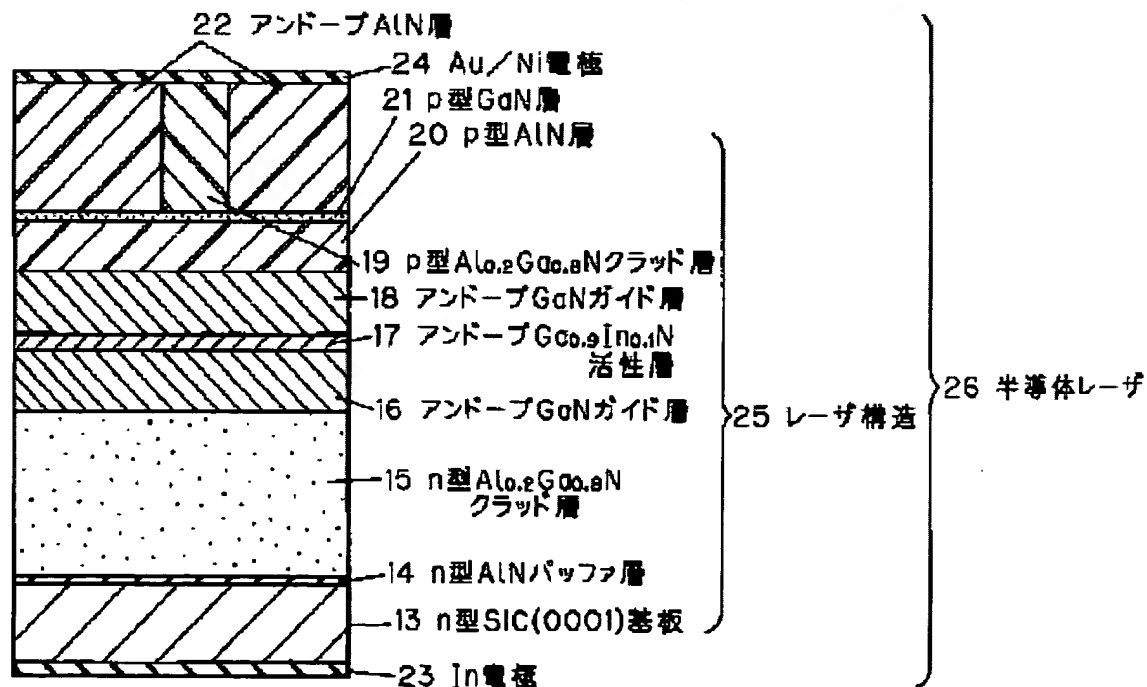
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(2,3,4,5,6,7,8) each containing at least one kind selected from aluminum, gallium, indium and boron, wherein an upper portion (7) of the stacked film is formed into a ridge-like stripe, to form a current injection region, a current non-injection region (8) formed on both sides of the ridge-like stripe (7) and at least part of the current non-injection region (8) is made from a material (AlN) expressed by a chemical formula AlGa_xN, the improvement wherein the component "x" of Al is specified at a value in a range of $0.3 \leq x \leq 1.0$, so that the semiconductor laser light emitting device is configured as an index guide type semiconductor laser light emitting device.

Note also figures 2 and 4.

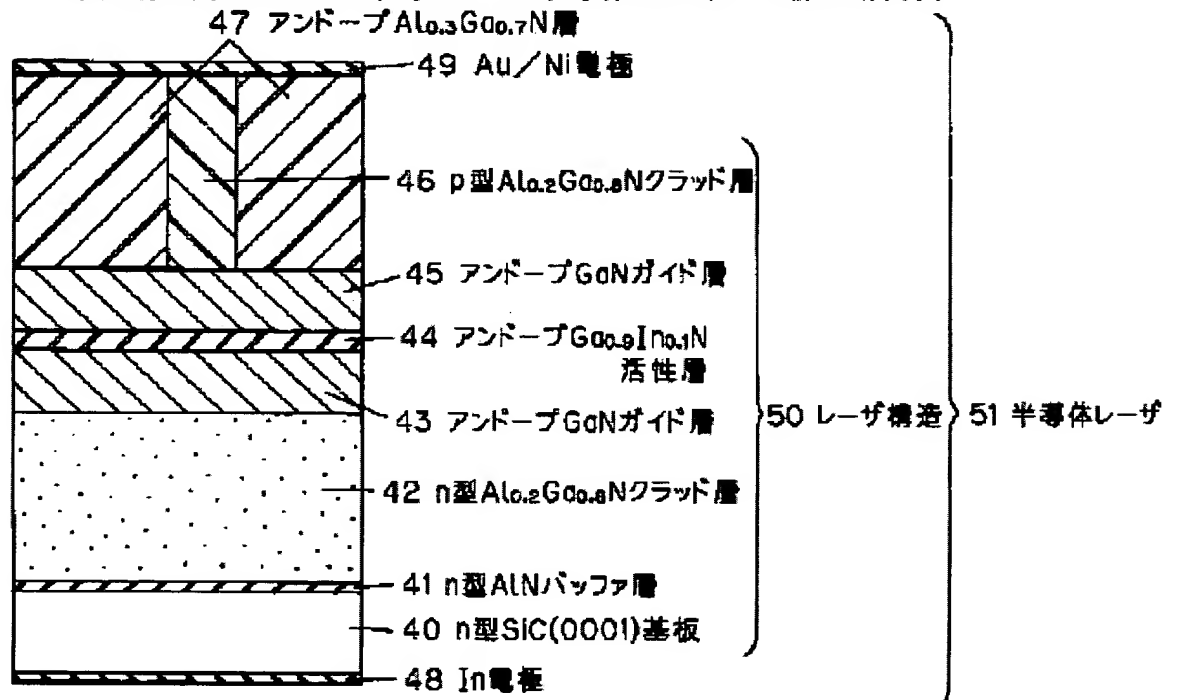
【図2】

本発明の、第2の実施の形態における半導体発光素子の構造断面図



【図4】

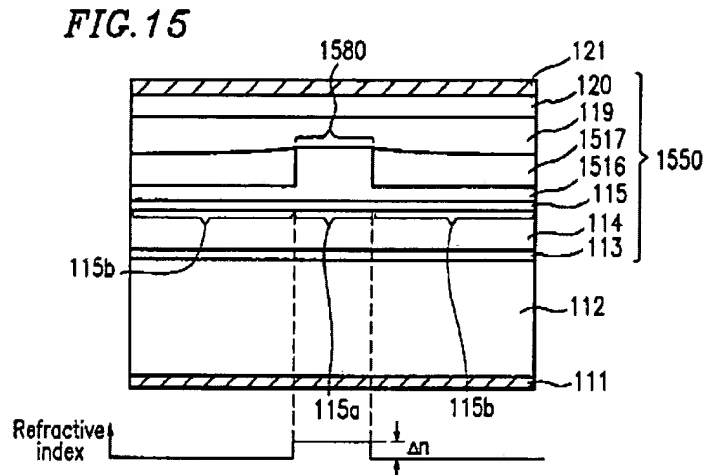
本発明の、第4の実施の形態における半導体発光素子の構造断面図



3. Claims 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kume et al (5,923,690). Kume teaches the claimed invention. For example, note figure 15 which illustrates a semiconductor laser light emitting device comprising a stacked film composed of a stack of group III nitride semiconductor films (1550) each containing at least one kind selected from aluminum, gallium, indium and boron, wherein an upper portion (1516) of the stacked film is formed into a ridge-like stripe (1580), to form a current injection region, a current non-injection region (1517) formed on both sides of

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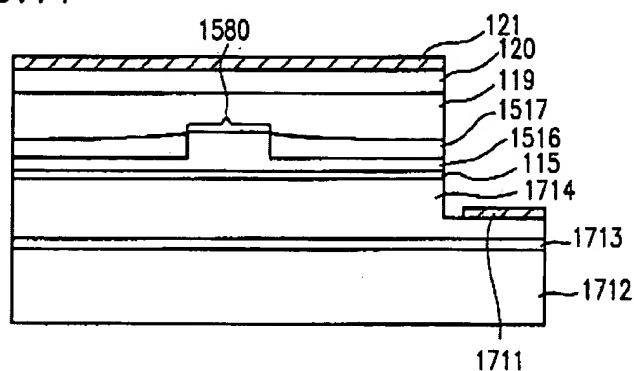
the ridge-like stripe (1580) and at least part of the current non-injection region (1517) is



made from a material ($\text{Al}_{x=0.25}\text{Ga}_{1-x}\text{N}$) expressed by a chemical formula AlGaN , the improvement wherein the component "x" of Al is specified at a value in a range of $0.15 < x < 0.30$, so that the semiconductor laser light emitting device is configured as a weak index type pulsation semiconductor laser light emitting device.

Note also figure 17.

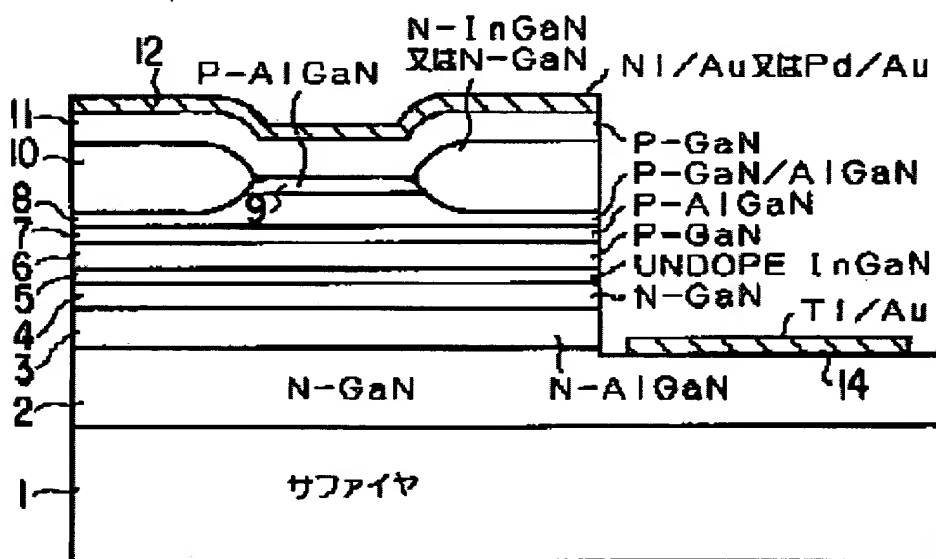
FIG. 17



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4. Claims 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by John et al (JP 10-093140-A). John et al discloses the claimed invention. For example, note figure 3 which illustrates a semiconductor laser light emitting device comprising a

【図3】



stacked film composed of a stack of group III nitride semiconductor films (2-11) each containing at least one kind selected from aluminum, gallium, indium and boron, wherein an upper portion (8, 9) of the stacked film is formed into a ridge-like stripe, to form a current injection region, a current non-injection region (10) formed on both sides of the ridge-like stripe (8,9) and at least part of the current non-injection region (10) is made from a material (GaN or, equivalently, $\text{Al}_{x=0}\text{Ga}_{1-x}\text{N}$) expressed by a chemical formula AlGa_xN , the improvement wherein the component "x" of Al is specified at a value

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in a range of $0 \leq x \leq 0.15$, so that the semiconductor laser light emitting device is configured as an gain guide type semiconductor laser light emitting device.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen P. Leung whose telephone number is (703) 308-0545. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Quyen P. Leung
Primary Examiner
Art Unit 2828

QPL
July 12, 2002